

What is claimed is:

1. A station class surge arrester comprising:
 - a module assembly including at least one metal oxide varistor (MOV) disk and a pre-impregnated composite applied around the at least one MOV disk, the pre-impregnated composite being capable of withstanding an 80 kA fault current for 12 cycles; and
 - contacts on opposite ends of the module assembly with which the module assembly is connected to electrical equipment to be protected and to electrical ground.
2. The station class surge arrester of claim 1 further comprising a housing, wherein:
 - the housing surrounds the module assembly; and
 - the contacts extend through the housing to enable connection of the module assembly to the electrical equipment and to electrical ground outside of the housing.
3. The station class surge arrester of claim 1, wherein the pre-impregnated composite comprises
 - a fabricated matrix of fiberglass bundles impregnated with epoxy resin and arranged around the at least one MOV disk, with the epoxy resin occupying any open spaces in the fabricated matrix of fiberglass bundles.
4. The station class surge arrester of claim 3 wherein the space between the fiberglass bundles is between 0.125 inches and 0.5 inches.
5. The station class surge arrester of claim 4 wherein the space between the fiberglass bundles is 0.1875 inches.
6. The station class surge arrester of claim 3 wherein the fabricated matrix is based on a fabric having a hurl leno woven construction.
7. The station class surge arrester of claim 6 wherein the woven construction has a warp count of at least 4.2.

8. The station class surge arrester of claim 6 wherein the woven construction has a fill count of at least 4.4.
9. The station class surge arrester of claim 6 wherein the weight of the un-impregnated woven construction is 15 ounces per square yard or less.
10. The station class surge arrester of claim 3 wherein the fiberglass bundles include E-glass 675.
11. The station class surge arrester of claim 3 wherein the fiberglass bundles include E-glass 450.
12. The station class surge arrester of claim 3 wherein the pre-impregnated composite is at least 50% epoxy resin by weight.
13. The station class surge arrester of claim 1 wherein the pre-impregnated composite has a thickness of about 0.020 inches.
14. The station class surge arrester of claim 13 wherein the pre-impregnated composite is applied around the at least one MOV disk multiple times.
15. The station class surge arrester of claim 14 wherein the pre-impregnated composite is applied around the at least one MOV disk three times such that the pre-impregnated composite surrounding the at least one MOV disk has a thickness of about 0.060 inches.
16. The station class surge arrester of claim 14 wherein the pre-impregnated composite is applied around the at least one MOV disk two times such that the pre-impregnated composite around the at least one MOV disk has a thickness of about 0.040 inches.
17. The station class surge arrester of claim 1 further comprising a scrim layer applied over the pre-impregnated composite.

18. The station class surge arrester of claim 17 wherein the scrim layer comprises:
 - an epoxy resin that contacts the pre-impregnated composite;
 - an incorporated matting that contacts the pre-impregnated composite and provides a framework for the epoxy resin of the scrim layer.
19. The station class surge arrester of claim 18 wherein the incorporated matting is made of a tightly woven polyester.
20. The station class surge arrester of claim 17 wherein the scrim layer has a thickness substantially between 0.008 inches and 0.012 inches.
21. The station class surge-arrester of claim 1 wherein the at least one MOV disk has a diameter substantially between two and three inches.
22. The station class surge arrester of claim 1 wherein fault current events typical of station class surge arresters include 80 kA root mean square symmetric currents.
23. The station class surge arrester of claim 1 wherein the module assembly has a cantilever strength between 10,000 in.-lbs. and 100,000 in.-lbs.
24. The station class surge arrester of claim 1 wherein the module assembly has a cantilever strength of about 35,000 in.-lbs.